CONTENTS

Page

Acknowledgements xiii

List of Participants xv

SESSION I

ANTI-FOLATE ACTION AND dTMP SYNTHASE

Session Chairman: S. WEINHOUSE

ESSWEIN, A., HÄNSELER, E., MONTEJANO, Y., VITOLS, K. S. and HUENNEKENS, F. M., Construction and Chemotherapeutic Potential of Carboxypeptidase-A/Monoclonal Antibody Conjugate 3

JACKMAN, A. L., MARSHAM, P. R., MORAN R. G., KIMBELL, R., O'CONNOR, B. M., HUGHES, L. R. and CALVERT, A. H., Thymidylate Synthase Inhibitors: The *In Vitro* Activity of a Series of Heterocyclic Benzoyl Ring Modified 2-Desamino-2-Methyl-N^{10}-substituted-5,8-Dideazafolates 13

SESSION II

ONCOGENES, SALVAGE AND DNA AS TARGETS

Session Chairman: J. G. CORY

HARRAP, K. R., KELLAND, L. R., JONES, M., GODDARD, P. M., ORR, R. M., MORGAN, S. E., MURRER, B. A., ABRAMS, M. J., GIANDOMENICO, C. M. and COBBLEIGH, T., Platinum Coordination Complexes Which Circumvent Cisplatin Resistance 31

WEBER, G., NAGAI, M., NATSUMEDA, Y., NAKAMURA, H., EBLE, J. N., JAYARAM, H. N., ZHEN, W., PAULIK, E., HOFFMAN, R. and TRICOT, G., Regulation of *De Novo* and Salvage Pathways in Chemotherapy 45

SESSION III

REGULATION OF KEY ENZYMES BY DRUGS

Session Chairman: H. L. PEARCE

TIHAN, T., ELFORD, H. L. and CORY, J. G., Studies on the Mechanisms of Inhibition of L1210 Cell Growth by 3,4-Dihydroxybenzohydroxamic Acid and 3,4-Dihydroxybenzamidoxime 71

COX, S., KOSHIDA, R., HARMENBERG, J. and WAHREN, B., Synergistic Combinations and Peptides in the Inhibition of Human Immunodeficiency Virus 85

SESSION IV

CONTROL OF ENZYME PROTEINS

Session Chairman: B. WAHREN

ROACH, P. J., CAO, Y., CORBETT, C. A., DePAOLI-ROACH, A. A., FARKAS, I., FIOL, C. J., FLOTOW, H., GRAVES, P. R., HARDY, T. A., HRUBEY, T. W., VISKUPIC, E. and ZHANG, W., Glycogen Metabolism and Signal Transduction in Mammals and Yeast 101

BENNER, S. A. and GERLOFF, D., Patterns of Divergence in Homologous Proteins as Indicators of Secondary and Tertiary Structure: A Prediction of the Structure of the Catalytic Domain of Protein Kinases 121

SESSION V

CONTROL OF GENE EXPRESSION

Session Chairman: E. HOFMANN

CASTAÑO, J. G., Regulation of Gene Expression by Insulin 185

GOLDBERG, D. M., PARKES, J. G., CHAJEK-SHAUL, T. and BGLIBTER, N., The Biological Significance of Lipoprotein Lipase Modulation by Phenobarbital and Heparin 195

SESSION VI

RECEPTORS AND CONTROLS

Session Chairman: R. W. ESTABROOK

NEWSHOLME, E. A. and BOARD, M., Application of Metabolic-Control Logic to Fuel Utilization and its Significance in Tumor Cells 225

SCHULZE, A., BÖHME, H.-J., GOLTZSCH, W. and HOFMANN, E., Interaction of 5-Azacytidine and Dexamethasone in the Control of Hepatic Tyrosine Aminotransferase 247

SESSION VII

CONTROL IN MOLECULAR GENETICS

Session Chairman: E. S. SEVERIN

NADAL-GINARD, B., SMITH, C. W. J., PATTON, J. G. and BREITBART, R. E., Alternative Splicing is an Efficient Mechanism for the Generation of Protein Diversity: Contractile Protein Genes as a Model System 261

OHNO, S., AKITA, Y., HATA, A., OSADA, S.-I., KUBO, K., KONNO, Y., AKIMOTO, K., MIZUNO, K., SAIDO, T., KUROKI, T. and SUZUKI, K., Structural and Functional Diversities of a Family of Signal Transducing Protein Kinases, Protein Kinase C Family; Two Distinct Classes of PKC, Conventional cPKC and Novel nPKC 287

SESSION VIII

ANTI-CARCINOGENESIS

Session Chairman: A. H. CONNEY

LUSSKA, A. E., JONES, K. W., ELFERINK., C. J., WU, L., SHEN, E. S., WEN, L.-P. and WHITLOCK, J. P., JR., 2,3,7,8-Tetrachlorodibenzo-*P*-Dioxin Induces Cytochrome P450IA1 Enzyme Activity by Activating Transcription of the Corresponding Gene 307

MURAMATSU, M., OKUDA, A., MORIMURA, S., OSADA, S., IMAGAWA, M. and SAKAI, M., Regulation of Glutathione Transferase P During Hepatocarcinogenesis of the Rat 319

SESSION IX

SUPPRESSOR GENE ACTION

Session Chairman: J. CHILLER

SCHWAB, M., Enhanced Expression of the Cellular Oncogene *MYCN* and Progression of Human Neuroblastoma 329

STRAND, D., TÖRÖK, I., KALMES, A., SCHMIDT, M., MERZ, R. and MECHLER, B. M., Transcriptional and Translational Regulation of the Expression of the *l(2)gl* Tumor Suppressor Gene of *Drosophila melanogaster* 339

SEVERIN, S. E., MOSKVITINA, E. L., GUBIN, A. N. and KISELEV, V. I., Ca^{2+}-Dependent Phosphorylation of Synapsin I as a Possible Regulatory Mechanism of Neurosecretion 351

SESSION X

MOLECULAR LEVEL OF CARCINOGENESIS

Session Chairman: K. R. HARRAP

ESTABROOK, R. W., MASON, J. I., SIMPSON, E. R., PETERSON, J. A. and WATERMAN, M. R., The Heterologous Expression of the Cytochromes P450: A New Approach for the Study of Enzyme Activities and Regulation 365

CONNEY, A. H., LYSZ, T., FERRARO, T., ABIDI, T. F., MANCHAND, P. S., LASKIN, J. D. and HUANG, M. T., Inhibitory Effect of Curcumin and Some Related Dietary Compounds on Tumor Promotion and Arachidonic Acid Metabolism in Mouse Skin 385

SESSION XI

NOVEL APPROACHES IN BIOLOGICAL CONTROL

Session Chairman: D. M. GOLDBERG

CAPITANI, S., COCCO, L., MARALDI, N. M., MAZZOTTI, G., BARNABEI, O. and MANZOLI, F. A., Inositol Lipid Phosphorylation in the Cell Nucleus 399

SEVERIN, E. S., MELIK-NUBAROV, N. S., OVCHARENKO, A. V., VINOGRADOV, S. V., KISELEV, V. I. and KABANOV, A. V., Hydrophobized Antiviral Antibodies and Antisense Oligonucleotides 417

SESSION XII

SPECIAL SYMPOSIUM LECTURE: G. H. HITCHINGS

Session Chairman: F. M. HUENNEKENS

HITCHINGS, G. H., Properties of Purine and Pyrimidine Analogs 433

Author Index 445

Subject Index 465

Contents of Some Previous Volumes 485